BeAGLE: e + ^{3}He

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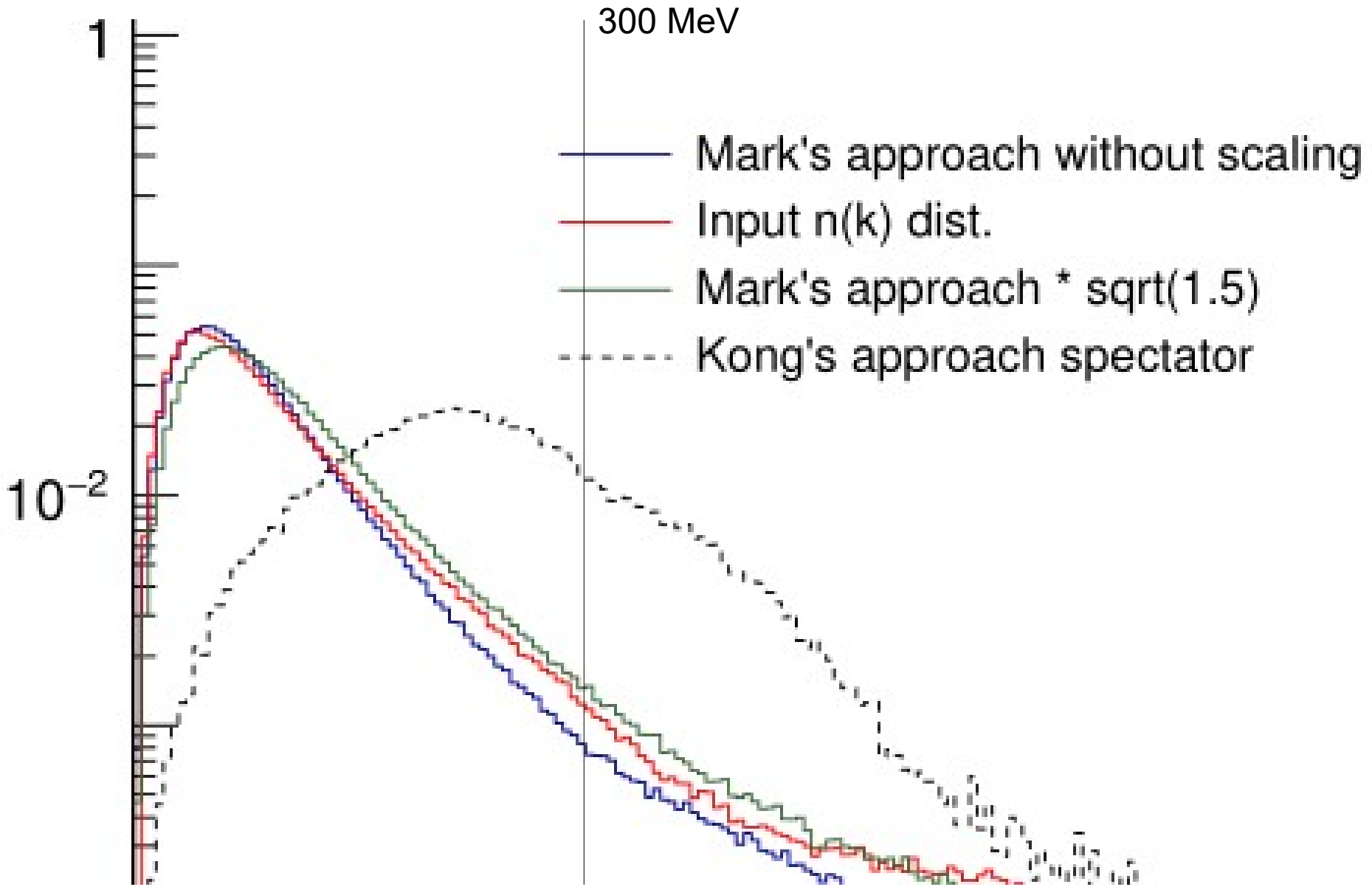
$e + {}^3He \rightarrow e' + p + p + X$

- Fixed BeAGLE to have a reasonable single-particle n(k)-based spectator distribution (Fermi momentum) for ^3He with struck neutron.
- Struck neutron (Pythia subevent) has slightly too much energy in the IRF. Will be fixed in the next iteration.
- NO FSI – (pp Coulomb, pp strong, pp Fermi exclusion).
- Longer term, will allow spectral function approach (Kong) + SRC (GCF-DIS).

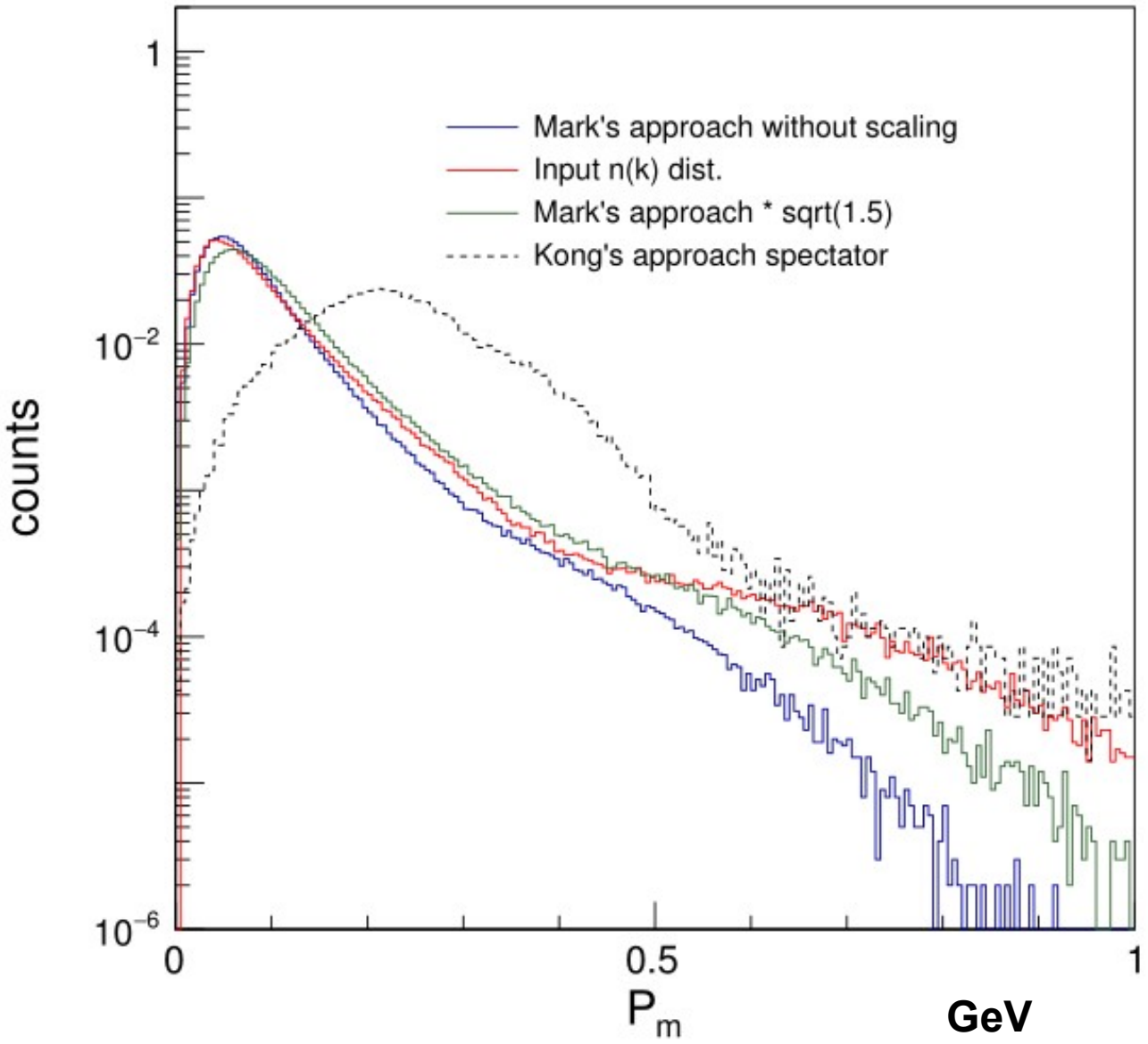
Single particle n(k) and p constraint

- Consider one component k_x.
- Roll 3 values of k_x: A, B, C
- Final result is:
  - $k_x(n) = 2/3\ A - 1/3\ B - 1/3\ C$
  - $k_x(p1) = -1/3\ A + 2/3\ B - 1/3\ C$
  - $k_x(p2) = -1/3\ A - 1/3\ B + 2/3\ C$
- RMS is sqrt(4/9+1/9+1/9) = sqrt(2/3) of original n(k).

Used n(k) between "Mark"&"Mark*sqrt(1.5)"



Zoom out (using Kong's toy model)



Files

- ~100k events each with STRUCK NEUTRON:
  - 5x41 inelastic (LODIS + O(α_s) + diffraction + ...)
    - About 2/3 LODIS
  - 10x110 inelastic
  - 5x41 J/ψ (J/ψ always intact, n intact or diffractive)
    - About 2/3 n intact
  - 10x110 J/ψ